ATTACHMENT A

GODDARD INFORMATION TECHNOLOGY INTEGRATION AND SUPPORT SERVICES (GITISS)

STATEMENT OF WORK

OCTOBER 2014

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1.0 BACKGROUND/SCOPE AND OBJECTIVE/APPLICABLE DOCUMENTS

The Information Technology and Communications Directorate (ITCD) provides leadership to the Goddard Space Flight Center (GSFC) and its stakeholders on all aspects of Information Technology (IT) management to ensure state-of-the-art computing, networking, and facilities that integrate and support a diverse, enterprise-wide information technology environment for GSFC. The Director of the ITCD serves as the GSFC Chief Information Officer (CIO), and is the chief advisor to the GSFC Center Director for IT strategy and planning, and IT service provisioning.

The ITCD supports GSFC's missions by implementing IT strategies, management of IT investments, and improving the efficiency and performance of GSFC information technology systems and services. The ITCD shapes the application of technology at GSFC in support of the Agency's strategic plan, and development and execution of the GSFC IT Strategic Plan, which outlines the long-term strategic architecture and systems plans for GSFC. The ITCD accomplishes this through close collaboration within GSFC, and with other NASA Centers, Government agencies, academia, and industry.

The ITCD builds and provides expertise in the areas of IT Investment Management, IT Governance, Resources Management, Enterprise Architecture, Policy and Standards Compliance, Portfolio Management, IT Security, IT Program Management, Performance Management and Monitoring, IT Service Delivery Management and Asset Management. To deliver the best value and highest level of IT Service to the GSFC mission, ITCD has defined this contract to allow ITCD and Center directorates to procure these IT services provided throughout GSFC.

The contract will be performance based. The Statement of Work (SOW) and the Indefinite Delivery, Indefinite Quantity (IDIQ) task orders will describe the work to be performed by the Contractor in terms of NASA-required outcomes and/or results. The contractor shall be responsible and accountable for achieving the required results.

1.1 Statement of Work Structure

Unless specifically stated in each individual task order, the requirements listed in section 1.0 shall apply to all tasks issued under the contract. The IDIQ requirements are outlined in the SOW, Section 2.0.

1.2 Applicable Regulations and Documents

The contractor shall adhere to applicable laws, directives, requirements and standards from the Federal Government, the Federal Chief Information Office (CIO), NASA Office of the Chief Information Office (OCIO), NASA Office of the Chief Engineer (OCE), NASA GSFC-ITCD-Code 700, and GSFC Code 500 - Applied Engineering & Technology Directorate, as well as

their successors, and any related child requirements issued by subordinate-level authorities. Sample applicable regulations include, but are not limited to:

- Children's Online Privacy Protection Act of 1998 (COPPA)
- Section 508 Amendment to the Rehabilitation Act of 1973
- Privacy Act of 1974
- NPR 1441.1D NASA Records Retention Schedules
- NPR 1600.1 NASA Security Program Procedural Requirements
- NPR 1600-55 Sensitive But Unclassified (SBU) Controlled Information
- NPR 2810.1, Security of Information Technology
- NPR 2841.1 Identity, Credential, and Access Management
- NPR 7120.5E NASA Space Flight Program and Project Management Requirements w/Changes 1-10
- NPR 7120.7, NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements.
- NPR 7123.1, NASA Systems Engineering Processes and Requirements
- NPR 7150.2A NASA Software Engineering Requirements
- GPR 1410.2, Configuration Management
- GPR 1440.8, Records Management
- GPR 1600.1, Goddard Security Requirements
- GPR 2800.2 CPIC: Information Technology Investment Management & Reporting Process
- NPR 2830.1A NASA Enterprise Architecture Procedures
- 740-PG-7120.7.2 Configuration Management Procedures and Guidelines
- 740-PG-7120.7.2 Information Technology (IT) Project Management Lifecycle Process
- 740-PG-7120.7.3 Schedule Management Procedures and Guidelines
- 740-PG-7120.7.4 Requirements Management Procedural Guidance
- 740-PG-7120.7.5 Stakeholder and Communication Management Procedures and Guidelines
- 740-PG-8000.1.1A Risk Management Procedures and Guidelines
- SP-6105, NASA Systems Engineering Handbook

Note that although the Government will make efforts to include all applicable regulations in

subordinate task orders, compliance requirements change over time and therefore it is anticipated that the contractor will work with the Contracting Officer's Representative (COR) and with the Contracting Officer (CO) to determine the best means to come into compliance as new applicable requirements emerge. Services also may include new and emerging technologies that will evolve over the life of the contract. These services may involve support for IT projects that are subject to the scope of NPR 7120.7, *NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements*, as well as IT projects that are subject to the scope of NPR 7120.5. When such requirements are specified as part of a standard task order, the contractor shall comply with NPR 7120.7 and/or 7120.5, as applicable.

1.3 IT Administration

The contractor shall develop, sustain and manage IT support in compliance with established software and web standards. In performance of these functions, the contractor shall:

a. Deliver a flexible, responsive operating platform of IT services, including service levels and associated metrics that can be accessed from anywhere in the enterprise, and provides value-added tools and capabilities for accomplishing the GSFC mission.

b. Research, recommend, and implement industry best practices, standards and innovation while ensuring compliance with applicable Federal and NASA policies and regulations.

c. Provide comprehensive analytical support to determine new requirements for existing enterprise systems, capabilities, and business processes in accordance with Agency and GSFC IT Strategic Direction.

d. Provide comprehensive analytical support to determine requirements for new and existing systems, capabilities and business processes. Implement and maintain processes for proactively researching, identifying and recommending new technologies and capabilities that will eliminate duplication, increase organizational efficiency, increase customer satisfaction and capitalize on industry best practices.

e. Provide incident, problem, and standard service requests processes integrated with service level management, change management and configuration management processes to ensure the delivery of services at agreed levels that follow Information Technology Infrastructure Library (ITIL) best practices.

f. Implement and maintain risk management processes and procedures that ensure adherence to NASA and GSFC/ITCD organizational security programs and adequately protects enterprise and domain infrastructure. Analyze and recommend security protection and management processes and technologies to mitigate application/system risk and implement as directed by the Government.

g. Provide effective and efficient Change Management processes to ensure changes are recorded through establishing formal communications and applied to all services and configuration items throughout the service lifecycle.

h. Provide effective and efficient Enterprise Configuration Management (CM) to assure input of asset management-related CM information. This includes developing, maintaining, coordinating, documenting and storing configuration records for use across the GSFC Enterprise.

i. Responsible for management and execution of NASA Project Lifecycle Pre-Phase A (Concept Studies) and Phase A (Concept & Technology Development).

1.4 IT Integration and Business Infrastructure Support

Development of an IT integration strategy that is aligned with the GSFC's strategic goals and objectives, and further refined to meet the unique needs of the individual domain areas, is vital to securing the stability and momentum necessary to realize cost efficiency and maximize to synergy. The rapid launch of an integration framework to set the course, plan for and execute day one, and design and maximize future-state operations is a critical success factor. The contractor shall assist the GSFC/ITCD with defining performance metrics, tracking and improving performance of the integrated operations and managing the business infrastructure; and shall support the Government in leveraging and collaborating to broker services via the Agency's NASA enterprise-wide technologies and services (e.g., Enterprise Service Desk - ESD and Infrastructure Integration Program - I3P contracts including: Enterprise Application Service Technologies - EAST, Web Enterprise Services Technology - WEST Prime, Agency Consolidated End-user Services - ACES, and NASA Integrated Communication Services - NICS, etc.). In performance of these functions, the contractor shall:

a. Provide architecture and execution strategies, including recommendations for short and long-term planning, related to overall infrastructure direction.

b. Design solutions to specific (hardware, software, security, etc.) deployments that involve the production systems, the coordination of upgrades and the installation of new systems and/or procedures.

c. Conduct requirements analysis and design alternative studies to identify technologies in support of future enterprise business expansion and requirements.

d. Conduct and document cost analysis, trade studies and risk analysis to support investment decisions.

1.5 Program Project Management

The contractor shall provide cost, schedule, risk, and technical management of all IT support and services, functions, and tasks in accordance with NPR 7120.7, *NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements*. In performance of these functions, the contractor shall:

a. Prepare and submit monthly reports of project plans, status; prepare and conduct monthly program management reviews including presentation and discussion of program priorities, project statuses, significant accomplishments, risk management, and problem areas.

b. Track official communications with the COR such as technical direction, requests for information, and transmittals, and provide status concerning all such communications.

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c. Monitor cost to ensure projects are within allocated funding.

1.6 Systems Engineering

The contractor shall be responsible for providing the necessary systems engineering for all IT Projects under the GSFC ITCD, and shall adhere to NASA systems engineering processes as described in NPR 7123. The contractor shall ensure the performance of engineering efforts for the re-design, qualification and other technical-related activities leading to improvement of fielded systems. In performance of these functions, the contractor shall:

a. Provide comprehensive sustaining software engineering services, custom development, testing, quality assurance and porting services to accelerate software non-standard product upgrades.

b. Provide full support of existing system versions, including maintenance of the source code and the version control environment to support end-of-life products.

c. Provide solutions to decommission failing components and integrate modern components to reduced costs, improved risk management, and improve integrated performance.

d. Investigate and propose alternatives to existing software used in the development of applications. Where appropriate, the contractor should seek to adapt existing solutions (whether openly available on the open market or provided by the Government) rather than developing all new solutions.

Additionally, the Contractor shall provide Software Management for Commercial off-the-shelf/Government off-the-shelf (COTS/GOTS), modified and custom software, including:

a. Regular review of the software's operating and support status.

b. Regular review of the current best practices for management and operations of the software, incorporating updates into ongoing process improvements.

c. Participation in Government-led software assessments and evaluations to identify performance or security gaps, and incorporate any identified corrective actions into routine system updates.

Software Assurance capability for all software developed or maintained under the terms of this contract, including identifying and implementing a software assurance maturity model that shall:

a. Integrate security considerations into all software engineering, development, and maintenance activities.

b. Assess and reports on the status of software engineering, development, and maintenance activities.

c. Assess emerging threats to maintain a threat model for Contractor-managed software.

d. Perform risk assessments on Contractor-managed software and mitigates or ameliorates impacts from risks in the operating environment or managed software, including the risk from 3rd-party components.

e. Provide formal controls over the design, validation, deployment, and maintenance phase.

For all Modified software, the contractor shall:

a. Identify and document all changes at the code level.

b. Conduct a risk and impact assessment for change, including whether the change introduces new security or reliability issues into the software.

c. Be responsible for maintaining the changes, including developing and applying necessary updates for reliability or security concerns.

d. Submit proposed patches to the vendor for inclusion in future releases (subject to appropriate licenses).

For all Custom software, the contractor shall:

a. Identify and document all changes at the code level.

b. Conduct a risk and impact assessment for change, including whether the change introduces new security or reliability issues into the software.

c. Be responsible for maintaining the changes, including developing and applying necessary updates for reliability or security concerns.

d. Submit proposed patches to the vendor for inclusion in future releases (subject to appropriate licenses).

e. Propose alternatives to meet requirements in a manner that reduces total cost of ownership to the Government (including software maintenance).

1.7 Information Security

The contractor shall adhere to the following requirements for all functional areas:

a. Comply with NASA's identity and credential issuance requirements. Staff may not begin working under this task order (TO) until a validated NASA identity with favorable background investigation adjudication is complete.

b. Possess and maintain professional information security training and expertise, such as that demonstrated through professional certification with ongoing education requirements (e.g., CISSP, CISM). Staff with insufficient training or expertise may not perform work under the TO, except through prior written approval of the TM or COR. The contractor is responsible for providing appropriate training for their staff and maintenance of ongoing professional education requirements.

c. Comply with all requirements of NFS 1852.209-71 for access to proprietary information.

d. Maintain organizations IT Security Plan and support assessment and authorization activities. Meet NASA requirements for asset and secure configuration management. Provide support to meet NASA continuous monitoring requirements.

e. Monitor progress and completion of Plan of Actions Milestones (POAM) that have been issued to the organization.

f. Ensure the organization is compliant with IT Security patches for appropriate hardware and software (i.e. servers). Proactively factor in software, firmware and hardware upgrades needed to account for vendor-identified security vulnerabilities and end-of-life support. Perform regular and ongoing vulnerability scanning and penetration testing

g. Perform secure code reviews and follow secure life cycle development activities for any software and application development in support of this TO.

h. Support incident response activities and investigations, direct and conduct Training and Awareness Program Initiatives.

All contractor support shall be:

a. Qualified to perform the job tasks covered within this TO, including a summary of the support personnel qualifications,

b. Have received annual ethics awareness training, including Federal ethics requirements,

c. Have completed NASA-specific mandatory training requirements (e.g., annual security awareness training) as directed by the Government,

d. Be fully compliant and current with all background investigation and clearance requirements, and

e. Be subject to the Contract clauses regarding the use and handling of sensitive and proprietary information, including information providing an unfair competitive advantage.

2.0 IDIQ SUPPORT

The contractor shall perform IDIQ task orders as issued by the CO to provide and support IT Operations. The contractor shall provide task specific technical management and supporting functions as described in SOW, Section 1.0 for each task order.

2.1 Enterprise Architecture (EA)

The contractor shall support the implementation and maintenance of an integrated Enterprise Architecture capability and program for the GSFC. In support of the EA Program the contractor shall make reference to NPR 2830.1A Enterprise Architecture, the Agency IRM and Strategic Plan and maintain cognizance of Federal and Agency mandates, budgetary constraints, guidelines, policies, IG reports, and performance status.

The contractor shall implement the overall Enterprise Architecture Process by generating Reference Architectures for GSFC, including the IT Current State and Target State, that will evolve over time in response to industry trends, lessons learned, and functional area input (i.e. Application, Networks, Computation, Engineering), etc. The Target Architecture is then compared against the Current State, resulting in Gap Analysis and Transition Plans. The transition plans support the future IT needs of the Center and progression toward the target architecture.

The contractor shall collaborate with stakeholders to produce the resultant strategic IT roadmap to guide IT spending decisions aligned to best support the Center mission and business goals. Task requirements include, but are not limited to the following:

a. Enable the EA Program as the content owner of the overall GSFC IT Strategic Plan and associated high-level Target Architectures and IT Transition Plans as developed with stakeholders and driven by mandates, leadership direction, budgetary pressures, contract obligations and lessons learned.

b. Enable the EA Program to participate and inform the investment management life cycle, including the development and review of investment issue papers, through the selection and implementation phases of the Capital Planning and Investment Control (CPIC) process.

c. Collaborate with stakeholders to produce target architectures, IT transition plans, gap analyses and strategic IT roadmaps to guide IT resourcing decisions aligned to best support the Center mission and business goals.

d. Support IT Project Reviews and IT Service Reviews according to NPR 2830.1 and NPR 7120.7 and as reflected in the Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) managed and provided by ITCD Program Management Office or other IT Working Groups as suggested via the GSFC Federated IT Governance Process.

e. Generate common IT standards, policies, and specifications that IT projects shall leverage for compliance and guidance.

f. Maintain and manage content repositories for EA program and Change Management artifacts.

g. Engage with stakeholders to foster a better understanding of mission requirements driving IT infrastructure change and promote evaluation and alignment of information technology and resources with mission priorities.

h. Provide EA technical implementation expertise in the design, development, and governance of Service-Oriented Architectures, Web-Oriented Architectures, and Managed Hosting and Cloud Computing Architectures for a Federal environment.

i. Participate in standards and forum boards to influence the direction of next generation standards and architectures.

j. Support EA Service Reviews to facilitate service integration into the as-is and future state Agency/Center architecture.

2.2 Innovation Support

The contractor shall implement and manage an effective IT innovation management program that provides a consistent methodology for identifying candidate information technologies that are architecturally compliant, insertion ready, and effectively managed for risk and cost. In support of this requirement, the contractor shall:

a. Develop and support an Innovation to Operations management framework and associated processes that comply with and are interoperable with Federal and NASA IT and project management policy (e.g., Federal Information Security Management Act-FISMA, National Institute of Standards and Technology – NIST, NPR 7120.7, NPR 7123.1, local GSFC IT governance processes, etc.). This operational framework shall facilitate the transition and integration of new and emerging information technologies to support GSFC lines of business.
b. Establish and maintain an Innovation and Chief Technology Officer (CTO)-IT information sharing and collaboration environment that is Web accessible.

c. Provide subject matter expert (SME) evaluations and assessments of new and emerging IT including, but not limited to cloud computing, mobile and social media, web, big data analytics and cyber information assurance.

d. Plan, design, build, execute and assess IT proofs of concepts and pilots within the GSFC private cloud, Federal community cloud and public cloud computing environments (e.g., Amazon, Google).

e. Provide systems engineering, documentation and integration support to transition IT proofs of concepts and pilots into operational capabilities.

f. Develop, implement, and maintain an integrated approach to identify, characterize, and validate candidate technologies for inclusion within the enterprise architecture.

g. Evaluate and report on potential technologies and equipment to determine functionality, feasibility, and merit. Utilize modeling, hands-on testing, market surveys, prototyping, pathfinder techniques and customer participation in evaluation efforts.

h. Develop and implement an integrated approach to capture, evaluate, and track IT solutions in support of mission needs.

i. Document and deliver technology obsolescence and retirement plans, and future technology insertion roadmaps.

j. Define requirements and maintain data in a collaborative and integrated web-based repository for capturing, communicating, and disseminating ideas, innovation management strategy, IT evaluation results, technology insertion roadmaps, technology obsolescence and retirement plans, architecture standards and performance.

2.3 IT Governance

The contractor shall support the execution of the Center's established Federated IT Governance model and Capital Planning & Investment Control (CPIC) processes and policies to ensure well-informed strategy, policy, architecture, standards and investment decisions. The contractor shall assist project managers and CPIC personnel in providing necessary investment documentation for budget input, investment control and evaluation of the investments.

2.4 Service/Help Desk

The contractor shall provide and maintain an onsite Enterprise Service Center for recording, triaging, troubleshooting, resolving and/or redirecting all incidents, problems and service requests using the software tool provided by the Government, as well as assisting with general information, questions, complaints or comments with the capability to communicate with the Enterprise Service Call Center in person or by voice, email, fax, and web interfaces.

2.5 Applications and Data Center

The contractor shall provide business re-engineering consultation services to understand customer's requirements and make business decisions that are aligned with Agency and Center Strategic Business needs; build and sustain strong customer relationships; and prepare the Center to meet future business information needs through the investigation and implementation of essential technologies.

a. Provide and maintain GSFC Data Center services and identify potential or actual system failures through proactive system monitoring to prevent or remedy situations. Support ITCD innovation initiatives for improving Data Center capabilities.

b. Ensure data backups are accomplished in a timely, effective, and consistent manner. Coordinate with the customers to ensure efficient use and availability of resources and the survivability of data.

c. Perform enterprise operations and maintenance ensuring desktop, server and application performance and availability. Proactively monitor enterprise systems, responsively communicate and report issues, resolve escalated customer requests, and provide engineering solutions to system problems.

d. Perform effective database design, testing, implementation and maintenance in order to responsively support GSFC enterprise applications.

e. Perform the IT Security function for the Data Center services. Maintains the necessary documents to keep the Authorization to Operate (ATO) for the Data Center active. Responds to IT Security Issues as they relate to the Data Center software and hardware. Proactively monitors the systems to be sure they are in compliance with the IT Security Handbook and all Processes and Procedures stated in the NIST standards documentation. Ensures the data is protected by complying with the conditions issued in the conditional ATO. Continues to provide IT Security consultation for the Accreditation Boundary Proposal for the container, as it currently resides on the OAIT Business Systems Security Plan.

f. Provide application development services and sustaining engineering support in a timely, innovative, efficient, and quality manner for the purpose of meeting the business information services requirements of GSFC and NASA as required

g. Perform operations and maintenance to ensure application performance and availability. Provide effective and timely coordination with Enterprise Service Center to ensure successful resolution of maintenance requirements. Proactively monitor systems and responsively communicate and report issues. Provide and implement Information Technology Infrastructure Library (ITIL) based processes best practices.

h. Employ clear and comprehensive release and deployment plans that enable customers and business plans to align their activities with the plans that minimize unpredicted impact on the production services, operations, and support organization.

i. Plan, design, build, configure and test all software and hardware to create a release package for the delivery of, or changes to, the applicable service.

j. Responsible for management and execution of NASA Project Lifecycle Phase B (Preliminary Design & Technology Completion), Phase C (Final Design & Fabrication), Phase D (System Assembly/Design & Launch) and Phase E (Operations & Sustainment).

k. Adhere to life cycle support consistent with the Software Engineering Institute (SEI) Level 2 Capability Maturity Model Integration (CMMI) assessment in all areas of software development with Government approval at logical breaks in the lifecycle.

l. Adhere to the Enterprise Solutions Division's Standard Operating Procedures (SOPs), policies, processes, and Service Level Agreements (SLAs).

2.6 IT Business and Administrative Support for the Solutions for Enterprise-Wide Procurement Program (SEWP)

The contractor shall provide all business support services and resources necessary to participate in strategic planning, customer outreach and operational activities of SEWP. The contractor shall provide the following:

a. The provision of training materials and education to customers, defining and executing market strategies, planning and organizing logistics for outreach efforts, and interfacing with Contract Holders and customers to ensure all need information about SEWP is provided.

b. Provide customer end-user support for all inbound requests (phone, email, web-interfaces), for all issues related to orders, request for quote, general contract information and account management. Enter and track the receipt of all SEWP orders/deliveries.

c. Provide support to Contract Holder Relationship Management Group.

d. Provide Systems Administration Support for SEWP servers, desktops, printers, applications and peripherals. This support includes patch maintenance, performance optimization, IT Security monitoring, network backups and restoration, and log monitoring. Provide incident/program diagnostics and resolutions for internal and external customers.

e. Provide Application Development Services, which includes requirements gathering, research, planning, design, writing and maintaining source code, maintenance and modification of SEWP software products and website. Provide problem resolution for SEWP developed applications and website.

f. Provide Network Engineering Support, which includes planning, designing, monitoring performance, maintaining security, making hardware upgrades to the computer network.

2.7 Information Security Management

The contractor shall provide security planning and management, security architecture, security compliance, Continuity of Operations (COOP) and Disaster Recovery (DR), and security operations in accordance with the latest NASA, National Institute of Standards and Technology (NIST) and Federal Information Security Management Act (FISMA) requirements. Some personnel supporting IT Security may be required to maintain a secret clearance.

a. Provide information security subject matter expertise to all information and systems development teams within ITCD and GSFC and provide recommendations on security measures and requirements throughout the stems development life cycle.

b. Understand emerging IT security needs and develop and adapt new processes, procedures and capabilities in response.

c. Maintain a robust knowledge of GSFC, NASA and Federal policies and guidance.

d. Participate in the development of Information Security Services (ISS) program metrics and periodically review existing ISS policies, procedures and processes against Federal and NASA compliance policies and standards as requested by the customer.

e. Recommend improvements or changes to ISS security policies, standards, operating procedures, technical guidance and any other security directives, guidance and procedures, as necessary.

f. Incorporate industry best practices for IT security management practices from sources including ITIL, NIST, and other NASA Centers Storage Area Network (SAN).

2.8 Project Management Support

The contractor shall support GSFC/ITCD in the analysis, planning, development and execution of projects. The contractor shall provide IT planning and scheduling support in the development, completion and maintenance of project management activities and artifacts; and shall utilize best project management industry best practices (e.g. Project Management Institute (PMI)) and NASA and GSFC standards and procedures NPR 7120.5, 7150.2, 7123.1, 7120.7 and 740-PG-7120.7.2, 740-PG-7120.7.3, 740-PG-7120.7.4, 740-PG-7120.7.5, 740-PG-1410.2.1 and 740-PG-8000.1.1A to:

a. Provide support to ITCD, Code 740 Project Management Office (PMO) in implementing the IT Program Integration and Management Division (PIMD) Business Plan to further plan the development and execution of ITCD’s PMO.

b. Ensure cost and schedule efficiency to minimize programmatic risks.
c. Ensure project management practices are used in the performance of work including development of project management plans, schedules, baselines and disciplined change control processes, to ensure performance reporting is accurate and up to date.